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## ABSTRACT OF THE INVENTION

A process for etching oxide is disclosed wherein a reproducibly accurate and uniform amount of silicon oxide can be removed from a surface of an oxide previously formed over a semiconductor substrate by exposing the oxide to a nitrogen plasma in an etch chamber while applying an rf bias to a substrate support on which the substrate is supported in the etch chamber. The thickness of the oxide removed in a given period of time may be changed by changing the amount of rf bias applied to the substrate through the substrate support.